

CLAIMS

1. A silicon epitaxial wafer having an excellent gettering capability in the entire radial direction thereof, wherein density of oxide precipitates
5 detectable in the interior of a silicon single crystal substrate after epitaxial growth is $1 \times 10^9/\text{cm}^3$ or higher at any position in the radial direction.
2. The silicon epitaxial wafer according to claim 1, wherein the silicon single crystal substrate prior to the epitaxial growth has Grown-in precipitation nuclei formed in a growth step for silicon single crystal, and
10 when the silicon single crystal substrate is heat treated in an oxidizing atmosphere, stacking faults in the form of a ring are not generated.
3. The silicon epitaxial wafer according to claim 1 or 2, wherein the silicon single crystal substrate prior to the epitaxial growth is a boron-doped substrate having resistivity of $0.1 \Omega\text{-cm}$ or lower.
- 15 4. A process for manufacturing a silicon epitaxial wafer having an excellent gettering capability in the entire substrate comprising the steps of:
heat treating a substrate for growing Grown-in precipitation nuclei;
and thereafter,
performing epitaxial growth on the substrate,
20 wherein there is used as the substrate a silicon single crystal wafer which has Grown-in precipitation nuclei formed in a growth step for silicon single crystal, and in which stacking faults in the form of a ring are not generated in a heat treatment in an oxidizing atmosphere.
5. The process for manufacturing a silicon epitaxial wafer according to
25 claim 4, wherein the substrate is a boron-doped substrate having resistivity

of 0.1 $\Omega\cdot\text{cm}$ or lower.